ABSTRACT

A scheme is described for distributing data operations on an irregular

data stream over multiple stages of a data aligner to generate a regular data

stream having continuous filled byte positions. In one particular embodiment,

5   data alignment may involve the prediction of a rotation amount for unaligned

data bytes. The rotation amount is predicted one clock cycle before actual

rotation of data bytes based on the current contents of a buffer. The one cycle

look ahead enables a large portion of calculations to be performed in a previous

clock cycle and, thereby, may facilitate a high frequency design for a data aligner.

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